

Application No. 10/761,745  
Atty. Docket No. 2002B124/2  
Response dated May 8, 2006  
Reply to final Office Action of March 22, 2006

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### REMARKS/ARGUMENTS

Claims 59, 95, and 102-103, as amended, as well as new claims 104-108, are presented for the Examiner's review and consideration.

Claim 59 has been amended herein to recite the full list of alloys described in the specification at Table 1 (page 14) and ¶¶ [0031]-[0036], as was originally intended. Claim 59 has also been amended herein to clarify the interchangeability of heating device and heating unit. Claim 59 has further been amended to clarify that the inlet is an oxygenate inlet, specifically for receiving an oxygenated hydrocarbon feedstock and to reintroduce that the commercial alloy is resistant to the formation of metal catalyzed side reaction byproducts from the oxygenate feedstock; exemplary support can be found in the originally-filed specification at ¶¶ [0019] and [0024]. Claims 95 and 102-103 have also been amended herein to properly depend from pending claim 59, instead of canceled claim 60, as well as to clarify that the originally-recited "first material" is now the "commercial alloy," to which the subject matter of these claims refer. New independent claim 104 is added herein to recite the features of originally filed claim 59, while taking into consideration indefiniteness assertions from this and the prior Office Actions. New claims 105-108 are added herein to depend from new claim 104 and to recite the features of originally filed claims 61, 95 and 102-103.

Applicants respectfully submit no new matter has been added, nor any new issues raised, by way of the claim amendments in this Response. As a result, Applicants respectfully request its entry into the record of the above-captioned application at this time.

#### The Claim Rejections Under 35 U.S.C § 112 Should be Reconsidered and Withdrawn

Claims 59, 95, and 102-103 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. This rejection is respectfully traversed.

Claim 59 was considered to be indefinite for an ambiguous relationship between the heating unit and heating device. In addition, claims 95 and 102-103 were considered to be indefinite because of the Markush groups therein, because of lack of antecedent basis of "first

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material," and because of their dependency on canceled claim 60. Claim 59 was amended to recite all the commercial alloys in the dependent claims and to clarify the heating unit/heating device relationship. Further, claims 95 and 102-103 were amended to correct their dependency and to clarify the Markush groups as representing the commercial alloy recited in the independent claim.

As a result, Applicant respectfully submits that claims 59, 95, and 102-103, as amended herein, have alleviated and/or rendered moot any indefiniteness rejections. Applicants, therefore, respectfully request that these rejections be reconsidered and withdrawn.

**The Claim Rejections Under 35 U.S.C § 102(b) Should be Reconsidered and Withdrawn**

Claim 59 was rejected under 35 U.S.C. § 102(b) as being anticipated by Cherish *et al.*, (U.S. Patent No. 4,282,010). This rejection is respectfully traversed.

Initially, the Examiner asserts that, because Cherish discloses a nozzle that introduces char fines or coals in a transport gas to a reactor vessel at a temperature in the range of 500°F, the nozzle of Cherish "*must inherently comprise* a heating device, not shown, for heating the feedstock up to said temperature." Final Office Action at page 3. Applicants respectfully submit, however, that no such requirement exists. As one of ordinary skill in the art would know, it is not only possible, but common, for gas streams to be heated remotely from the nozzle introducing them into a vessel, such that the temperature of the gas stream, when it reaches the vessel, is at or about a given temperature. The mere presence of a gas stream at an elevated temperature does not mean that the nozzle or nozzle inlet *must inherently comprise* a heating unit, as asserted by the Examiner. Claim 59, as amended affirmatively recites that the nozzle inlet comprises a heating device. For this reason alone, Applicants respectfully submit that Cherish does not disclose nor suggest all the elements of independent claim 59.

Alternately or additionally, claim 59, as amended, recites a feed vaporization and introduction system for a methanol-to-olefin (MTO) reactor, which includes an oxygenate feed inlet for receiving an oxygenate (*i.e.*, an oxygenated hydrocarbon, *e.g.*, methanol) feedstock. New claim 104, as presented herein, similarly recites an oxygenate feed vaporization and

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introduction system including an oxygenate feed introduction nozzle for introducing an oxygenate feedstock.

Cherish, however, discloses a coaxial feed system for fluidized-bed coal gasification processes including an inner tube for injecting particulate combustibles into a transport gas, an inner annulus about the inner tube for injecting an oxidizing gas, and an outer annulus about the inner annulus for transporting a fluidizing/cooling gas. *See* Cherish Abstract. Cherish further teaches that the particulate combustibles include char fines, coke, or pulverized coal, and that the oxidizing gas is typically oxygen or air. *Id.* at col. 1, lines 25-30.

Applicants respectfully submit that Cherish does not disclose or suggest an oxygenate feed introduction nozzle, an oxygenate feedstock, or an oxygenate feed vaporization and introduction system. Indeed, Cherish discloses an oxidizing gas nozzle for introducing an O<sub>2</sub>-containing gas into a reactor. Applicants respectfully assert that any reaction of high-temperature oxygen gas with metal/alloy nozzles (Cherish) necessarily creates different byproducts than those metal catalyzed byproducts from high-temperature oxygenated hydrocarbon flow through metal/alloy nozzles (*e.g.*, claims 59 and 104, as presented herein).

Applicants further respectfully submit that each of the prior art references cited by the Examiner in the non-final Office Action, dated October 11, 2005, either discloses O<sub>2</sub>-containing gas feedstock, *e.g.*, used in a reforming-type or wet oxidation process (U.S. Patent Nos. 5,588,974 to Tiller *et al.* and 4,461,743 to Chowdhury *et al.*, as well as European Patent Application No. EP 0 135 144 to Sterling Drug Inc.), or discloses generically anti-corrosive metal alloys/coatings (U.S. Patent Nos. 4,909,984 to Singheiser, 4,826,738 to Smeggil, 4,500,489 to Nicoll, 3,574,601 to Myers *et al.*, 3,015,558 to Grant *et al.*, 2,234,955 to Bieber *et al.*, Hastelloy® C-276 Product Specification, and Carpenter® 20-Cb3 Product Specification). None of the prior art references cited by the Examiner throughout this entire file history disclose or even suggest metal alloy-containing nozzles for oxygenate feedstocks that are resistant to the formation of oxygenate-specific metal catalyzed side reaction byproducts.

For any of the foregoing reasons, Applicants respectfully submit that the anticipation rejection of claim 59, as amended, over Cherish cannot be maintained, and respectfully request reconsideration and withdrawal of the anticipation rejection of claim 59.

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**The Claim Rejections Under 35 U.S.C § 103 Should be Reconsidered and Withdrawn**

Claims 95 and 102-103 were rejected under 35 U.S.C. § 103(a) as being obvious over *Cherish et al.* This rejection is traversed.

Initially, Applicants respectfully draw the Examiner's attention to the taking of Official Notice regarding claims 95 and 102-103 "that the recited commercial alloys are well known materials in the art of nozzle construction." Final Office Action at pages 5-6. Applicants respectfully submit that the Examiner has provided no documentary evidentiary support whatsoever for this proposition, nor any clear or unmistakable technical line of reasoning supporting this conclusion, but has merely made a conclusory statement and taken Official Notice thereof; such action is contrary to U.S. Patent & Trademark Office practice. *See M.P.E.P.* § 2144.03.

As Examiner's entire obviousness rejections of claims 95 and 102-103 over *Cherish* are based on this Official Notice, Applicants therefore respectfully request that the Examiner either cite documentary evidence or clearly and unmistakably evince the technical line of reasoning for these assertions or withdraw the obviousness rejections of these claims. As the above-captioned application is currently after final, Applicants respectfully make this request regardless of whether the claim amendments and/or new claims are entered.

Furthermore, as noted in the previous section, *Cherish*, and indeed all the prior art cited by the Examiner to this point in the above-captioned file history, fails to disclose all the features recited in independent claim 59 (and, for that matter, independent claim 104), as presented herein. Other than the statements made in the final Office Action regarding the unpatentability of claim 59, which Applicants have addressed hereinabove, the Examiner has offered no other reason(s) why the dependent claims would not be patentable. As a result, Applicants respectfully submit that the obviousness rejection of claims 95 and 102-103, as amended, over *Cherish* cannot be maintained, and respectfully request reconsideration and withdrawal of the obviousness rejection of claims 95 and 102-103.

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**CONCLUSIONS**

Having demonstrated that the cited references fail to disclose or suggest the invention as claimed, and all other formal issues having now been fully addressed, this application is believed to be in condition for allowance. Accordingly, Applicants request early and favorable reconsideration in the form of a Notice of Allowance.

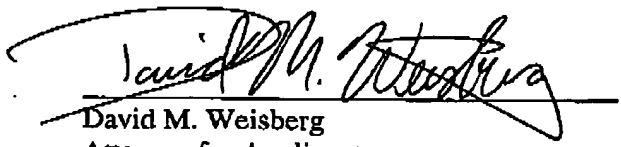
If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated, since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this submission should be considered as a petition for an Extension of Time sufficient to effect a timely response. Please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1712 (Docket #: 2002B124/2).

Respectfully submitted,

Date:

5/8/06



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